

What Is Claimed Is:

1. A device for producing a detection signal when interfering components occur in an at least largely non-conductive stream of material being conveyed via a conveyor, comprising:

an alternating current generator configured to build up, through a transmitting coil, an alternating electromagnetic field in a segment of the stream of material;

a coil system configured to detect changes in amplitude and phase of the alternating electromagnetic field;

an evaluation circuit coupled to the coil system and configured to derive the detection signal, which, when an interfering component of the material being conveyed appears, causes the conveyor to be stopped for removal of the interfering component from the stream;

a resetting device capable of canceling the stoppage of the conveyor; and

a blocking device controlled by the evaluation circuit and provided for the resetting device, the blocking device configured to disable the resetting device as long as the evaluating circuit is still emitting a signal that is classifiable as a detection signal.

2. The device as recited in claim 1, further comprising:

at least one AC voltage amplifier provided in a transmission path from the coil system to the evaluation circuit, the AC voltage amplifier being designed to be switchable to such a low value in regard to its lower cutoff frequency, that in a switched state, a transmission behavior of the AC voltage amplifier at least approximately approaches that of a DC voltage

amplifier, and wherein an output signal of the AC voltage amplifier actuates the blocking device.

3. The device as recited in claim 2, wherein the lower cutoff frequency is lowered briefly and intermittently.

4. The device as recited in claim 1, wherein the blocking by the blocking device disables the resetting device, at least for a period of time needed to remove the interfering component from the stream.

5. The device as recited in claim 1, wherein the evaluation circuit is configured to derive the blocking signal from at least one of the amplitude and the phase, the blocking signal opening a current circuit of the resetting device.

6. The device as recited in claim 1, further comprising:
a sampling device configured to sample at least one of the phase and the amplitude;

a memory which continuously stores sampled values from the sampling device;

a comparator;

a memory readout device provided for the memory configured to feed to the comparator, when the conveyor stops, at least one of the values stored before the stoppage of the conveyor and a value of at least one of the phase and the amplitude occurring after the stoppage of the conveyor, the comparator blocking the resetting device when a resulting comparison value exceeds a limiting value.

7. The device as recited in claim 6, wherein the comparator is a subtractor.

8. The device as recited in claim 6, further comprising:

an averaging device assigned to the memory, which forms a mean signal for the comparison from a plurality of the sampled values stored in the memory.

9. The device as recited in claim 1, wherein the blocking device includes a bi-stable relay having two load windings and one normally closed contact, the bi-stable relay being provided in an electric circuit of a contactor relay for driving a motor of the conveyor, a first one of the load windings being provided in an electric circuit of the resetting device, a normally closed contact of another relay fed by a compensation stage of the evaluation circuit also provided in the electric circuit of the resetting device, and wherein the blocking signal is fed to the second one of the load windings.

10. The device as recited in claim 1, wherein the blocking device includes a contact relay having a first load winding and a normally closed contact, the contact relay being provided in an electric circuit for feeding a drive motor of the conveyor, the blocking device further including a second relay having a normally closed contact and a load winding which is inserted into an electric circuit of the first load winding, the normally closed contact of the second relay being provided in an electric circuit of the resetting device via a normally closed contact of a third relay having a load winding, wherein the blocking signal that occurs when an interfering component appears switches the normally closed contact in the resetting device to an open state.

11. The device as recited in claim 1, wherein the blocking device includes at least one threshold circuit

that reduces a DC voltage component compared to the changes.